Treatment Advocacy Center Backgrounder

Assisted outpatient treatment (AOT)

SUMMARY: Forty-four states permit the use of assisted outpatient treatment (AOT), also called outpatient commitment. AOT is court-ordered treatment (including medication) for individuals who have a history of medication noncompliance, as a condition of their remaining in the community. Studies and data from states using AOT prove that it is effective in reducing the incidence and duration of hospitalization, homelessness, arrests and incarcerations, victimization, and violent episodes. AOT also increases treatment compliance and promotes long-term voluntary compliance, while reducing caregiver stress. The six states that do not have AOT are Connecticut, Maryland, Massachusetts, New Mexico, Nevada, and Tennessee.

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Assisted outpatient treatment reduces hospitalization.
Several studies have clearly established the effectiveness of AOT in decreasing hospitalization.

Researchers in 2009 conducted an independent evaluation of New York's court-ordered outpatient treatment law ("Kendra's Law") and documented a striking decline in the rate of hospitalization among participants. During a six-month study period, AOT recipients were hospitalized at less than half the rate they were hospitalized in the six months prior to receiving AOT (i.e., the hospitalization rate dropped from 74 percent to 36 percent). Among those admitted, hospital stays were shorter: average length of hospitalization dropped from 18 days prior to AOT to 11 days during the first six months of AOT and 10 days for the seventh through twelfth months of AOT (Swartz et al. 2009, 26-29).

A randomized controlled study in North Carolina (part of the so-called "Duke Study") in 1999 demonstrated that intensive routine outpatient services alone, without a court order, did not reduce hospital admission. However, when the same level of services (at least three outpatient visits per month, with a median of 7.5 visits per month) were combined with long-term AOT (six months or more), hospital admissions were reduced 57 percent, and length of hospital stay was reduced by 20 days compared to individuals receiving the services alone. The results were even more dramatic for the subset of individuals with schizophrenia and other psychotic disorders. For them, long-term AOT reduced hospital admissions by 72 percent and length of hospital stay by 28 days compared with the services alone. The participants in the North Carolina study were from both urban and rural communities and "generally did not view themselves as mentally ill or in need of treatment" (Swartz et al. 1999).

A 1986 study in Washington, D.C., found that the average patient's number of hospital admissions decreased from 1.81 per year before AOT to 0.95 per year after AOT (Zanni and deVeau 1986). In a more recent Washington study of 115 patients, AOT decreased

hospitalization by 30 percent over two years. The savings in hospital costs for these 115 patients alone was $1.3 million (Zanni and Stavis 2007). In Ohio, the decrease in hospital admissions was from 1.5 to 0.4 (Munetz et al. 1996) and in Iowa, from 1.3 to 0.3 over a 12 month period (Rohland 1998).

In an AOT program in Florida, AOT reduced hospital days from 64 to 37 days per patient over 18 months, a 43percent decrease. The savings in hospital costs averaged $14,463 per patient (Esposito et al. 2008).

Only two studies have failed to find court-ordered outpatient treatment effective in reducing admissions. One was a Tennessee study in which "outpatient clinics [were] not vigorously enforcing the law," and thus non-adherence had no consequences (Bursten 1986). The second was a Bellevue Hospital (New York City) study that pre-dated the enactment of Kendra's Law and was based on a small AOT pilot program at that hospital (Policy Research Associates 1998). The study authors acknowledged that they could not "draw wide-ranging conclusions … [due to] the modest size of [the] study group." As in the Tennessee study, there were no consequences to an individual for non-adherence, calling the significance of the findings into serious question. Although not statistically significant because of the small study group, the Bellevue study suggests that the court orders did in fact help reduce the need for hospitalization. Patients in the control group spent a median of 101 days in the hospital, while patients in the court-ordered group spent a median of 43 days in the hospital during the study.

Assisted outpatient treatment reduces homelessness.
A tragic consequence for many individuals with untreated mental illnesses is homelessness. At any given time, there are more people with untreated severe psychiatric illnesses living on America's streets than are receiving care in hospitals. In New York, when compared to three years prior to participation in the program, 74 percent fewer AOT recipients experienced homelessness (New York State Office of Mental Health 2005).

Assisted outpatient treatment reduces arrests and incarceration.
A study of the New York State Kendra's Law program published in 2010 concluded that the "odds of arrest in any given month for participants who were currently receiving AOT were nearly two-thirds lower" than those not receiving AOT (Gilbert et al. 2010).

According to a New York State Office of Mental Health 2005 report on Kendra's Law, arrests for AOT participants were reduced by 83 percent, plummeting from 30 percent prior to the onset of a court order to only 5 percent after participating in the program (New York State Office of Mental Health 2005, 18).

In a Florida report, AOT reduced days spent in jail among participants from 16.1 to 4.5 days, a 72 percent reduction (Esposito et al. 2008).

Similarly, the Duke study in North Carolina found that, for individuals who had a history of multiple hospital admissions combined with arrests and/or violence in the prior year, long-term AOT reduced the risk of arrest by 74 percent. The arrest rate for participants in long-term AOT was 12 percent, compared with 47 percent for those who had services without a court order (Swanson et al. 2001).

Assisted outpatient treatment reduces violence, crime, and victimization.
The 2005 New York State Office of Mental Health report also found that Kendra's Law resulted

in dramatic reductions in harmful behaviors for AOT. Among AOT recipients at six months of assisted outpatient treatment compared to a similar period of time prior to the court order: 55 percent fewer recipients engaged in suicide attempts or physical harm to self; 47 percent fewer physically harmed others; 46 percent fewer damaged or destroyed property; and 43 percent fewer threatened physical harm to others. Overall, the average decrease in harmful behaviors was 44 percent (New York State Office of Mental Health 2005, 16).

A 2010 study by Columbia University's Mailman School of Public Health reached equally striking findings about the impact of Kendra's Law on the incidence of violent criminal behavior. When AOT recipients in New York City and a control group of other mentally ill outpatients were tracked and compared, the AOT patients – despite having *more* violent histories – were found four times less likely to perpetrate serious violence after undergoing treatment (Phelan et al. 2010).

The Duke Study in North Carolina found that long-term AOT combined with intensive routine outpatient services was significantly more effective in reducing violence and improving outcomes for severely mentally ill individuals than the same level of outpatient care without a court order. Results from that study showed a 36 percent reduction in violence among severely mentally ill individuals in long-term AOT (180 days or more) compared to individuals receiving AOT for shorter terms (0 to 179 days). Among a group of individuals characterized as "seriously violent," 63.3 percent of those not in long-term AOT repeated violent acts, while only 37.5 percent of those in long-term AOT did so. Long-term AOT combined with routine outpatient services reduced the predicted probability of violence by 50 percent (Swanson et al. 2001b).

The North Carolina study further demonstrated that individuals with severe psychiatric illnesses who were not on AOT "were almost twice as likely to be victimized as were outpatient commitment subjects." Twenty-four percent of those on AOT were victimized, compared with 42 percent of those not on AOT. The authors noted "risk of victimization decreased with increased duration of outpatient commitment" and suggested that "outpatient commitment reduces criminal victimization through improving treatment adherence, decreasing substance abuse, and diminishing violent incidents" that may evoke retaliation (Hiday et al. 2002).

Assisted outpatient treatment improves treatment compliance.

AOT has also been shown to be effective in increasing treatment compliance. In New York, according to the 2005 New York State Office of Mental Health report, AOT led to a 51 percent increase in recipients' exhibition of good service engagement, and more than doubled the exhibition of "good" adherence to medication (New York State Office of Mental Health 2005, 11-13).

In North Carolina, only 30 percent of AOT patients refused medication during a six-month period, compared to 66 percent of patients not under AOT (Hiday and Scheid-Cook 1987). In Ohio, AOT increased attendance to outpatient psychiatric appointments from 5.7 to 13.0 per year; it also increased attendance at day treatment sessions from 23 to 60 per year (Munetz et al. 1996).

AOT also promotes long-term voluntary treatment compliance. In Arizona, "71 percent [of AOT patients] . . . voluntarily maintained treatment contacts six months after their orders expired" compared with "almost no patients" who were not court-ordered to outpatient treatment (Van Putten et al. 1988). In Iowa, "it appears as though outpatient commitment promotes treatment compliance in about 80 percent of patients while they are on outpatient commitment. After

commitment is terminated, about three-quarters of that group remained in treatment on a voluntary basis" (Rohland 1998).

The New York Independent Evaluation also yielded interesting findings on the likelihood of voluntary compliance after AOT is allowed to expire. For individuals who received AOT for periods of six months or less, the researchers found that post-AOT sustainability of improvements in medication adherence depended on whether intensive outpatient services were continued on a voluntary basis. Those who continued with intensive services maintained their substantial increase in medication adherence relative to the pre-AOT period (from 37 to 45 percent); those who discontinued such assistance dropped back to near the pre-AOT levels (33 percent). Patients who received AOT for more than six months, however, experienced *increased* medication adherence *whether or not intensive services were continued.* The medication adherence rate was higher for those who continued intensive services than for those who did not (50 percent vs. 43 percent), but both groups maintained substantial improvements from the pre-AOT rate (37 percent) (Swartz et al. 2009, 39-44).

Assisted outpatient treatment improves substance abuse treatment outcomes.
Individuals who received a court order under New York's Kendra's Law were 58 percent more likely to have a co-occurring substance abuse problem compared with a similar population of mental health service recipients not receiving AOT. Furthermore, the prevalence of substance abuse at six months in AOT as compared to a similar period of time prior to the court order decreased substantially: 49 percent fewer abused alcohol (from 45 percent to 23 percent), and 48 percent fewer abused drugs (from 44 percent to 23 percent) (New York State Office of Mental Health 2005, 16).

Assisted outpatient treatment reduces caregiver stress.
A study published in 2004 examined the impact of AOT on those who serve as primary caregivers for people with severe mental illness (typically, family members). The level of reported stress was compared for caregivers of individuals who received AOT of at least six months, those who received brief AOT, and those who received no AOT. The results indicated that extended AOT (six months or more) significantly reduced caregiver stress. Not surprisingly, improved treatment adherence was also found to reduce caregiver stress. Notably, the study showed that AOT operates as an independent factor from treatment adherence in reducing stress. That is, AOT "contributes significantly to reduced caregiver strain, over and above its effect on treatment adherence" (Groff et al. 2004).

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